

Work Order ID 77380

77380

Page 1

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Item ID: D3391-021 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Fwd Tube Assembly
 Start Date: 06/12/2011 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 13/12/2011 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: M.L.J Date: 11/12/06 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	I								

100 Skidtubes 0.00
100
 Skidtubes Memo 0.00
 Skidtubes Cut extrusion to 46.52 +0.010 -0.020

DP

12-1-5

110 BENDING MACHINE - SKIDTUBES 0.00
110
 CNC Bend 1 Memo 0.00
 CNC Delta 100 Bender Bend as per Dwg D3391 Using Bend Prog 3391021

DP

12-1-5

120 QC5- Inspect part completeness to step on W/O 0.00
120
 QC Memo 0.00
 Quality Control

1 0 BE12-01-06

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Fwd Tube Assembly

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1

Cust Item ID:

Required Date: 13/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: ~~Process Plan~~ _____ Date: _____ Tooling: _____ Date: _____Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	HAAS CNC VERTICAL MACHINING #1								
HAAS I	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA590 Rev. <u>AA</u> & Dwg D3391 Rev. <u>I</u> Identify as D3391-1 2-Deburr								
140		0.00							
140	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							
Quality Control									
150		0.00							
150	CONVENTIONAL MILLING MACHINE								
Mill Conv	Memo	0.00							
Conventional Milling Machine	Drill X1 Aft cap as per Dwg D3391 .1875" dia								

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Dart Aerospace Ltd

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Sequence ID/ Work.Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Skidtubes	0.00							
180	Memo	0.00							
Skidtubes	<p>1-Drill float bag holes as per Dwg D3391 using DT8798(Do not open tow cap holes to finish size) (ONLY DRILL HOLES MARKED "A")</p> <p>2-Drill Remaining two holes for tow cap using DT 8819 Locating off of .1875" holes drilled in previous step</p> <p>3-Open tow cap holes to .208" as per Dwg D3391</p> <p>4-Open Tow Ring hole to .640" as per Dwg D3391</p> <p>5- open float bag holes 0.328" and counter sink as per dwg D3391</p> <p>6-Deburr & Scribe Batch number Inside aft end.</p> <p>7-Transfer drill D3391-021 with D3391-023</p> <p>*NOTE: NO weaphole holes are Transfer Drilled</p>								
QC5- Inspect part completeness to step on W/O		0.00							
190									
190	Memo	0.00							
QC									
Quality Control									

12-01-10
 DL 12/02/08

8/2/09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Reference:

Run Start *NR1*

Stop ***NR2***

OC: _____ Date: _____ SPC (Y/N): _____ Date: _____

200 Chemical Conversion Coat per QSI005 4.1

200

HandFinish

Hand Finishing

Memo

0.00

210

210

QC

Quality Control

QC3- Inspect Part Finish

Qc 7

Memo

0.00

0.00

220

220

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

0.00

1-instal spacers as per dwg D3391
A/R Magnabond 6398 batch: 117870
exp. date: 12/02
cure time 12hrs. as per QS1015
2- grind crossbolt flush
3-back drill crossbolt if necessary

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W/O: 77380		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-02-09	210	change Qc 3 to Qc 7	SAD DA				

Part No: D 3391-021 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 *230* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 <i>5 12/2/11</i> 0.00							
235 *235* HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo AND REALODINE AS PER PAR09-043	0.00 0.00							
240 *240* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: <i>1:50</i> OVEN TEMPERATURE: <i>320 °F</i> FINISH TIME: <i>2:20</i>	0.00 0.00							

1X M/L 12/02/16

1X M/L 12/02/21

mu480

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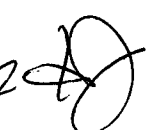
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	Identify as per dwg & Stock Location: <u>W10</u>	0.00	D412-742-043	1379953		1	0	11/12/12	
260									
Packaging	Memo	0.00							
Packaging									
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	0.00							
Quality Control									

12/2/22 
mk
12-02-22

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Work Order ID: 77380

77380

Parent Item: D3391-021

D3391-021

Parent Item Name: Fwd Tube Assembly

Start Date: 06/12/2011

Required Date: 13/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.09.13New issue KJ/JLM
 IPP B06.02.10Dwg rev.D ecn 773 EC
 IPP C06.05.02Added inspections EC
 IPP D 07.03.13 rev F dwg EC
 IPP E 07.11.07 revG dwg ecn1053P EC verified by: DD
 IPP Rev:f ECN 1056 07-11-12 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev I 09.02.02 added hardware EC verified by: DD IPP Rev:J
 11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4095-051		Manufactured	No			255	Each	13.0000	1	1			
D4095-051 Wearpad Assembly													
** 378821 (y1) 24 12/02/21													

Location	Loc Qty	Loc Code
FP	13	
76220	7	
76539	6	

D6013-047		Manufactured	No			100	Each	0.0000	1	1			
D6013-047 Skidtube Material													
** 1322505													
D3670-4-200		Manufactured	No			220	Each	63.0000	4	4			
D3670-4-200 SPACER													
** 4 12/02/09													

Location	Loc Qty	Loc Code
LG001	63	
72851	63	

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77380

Parent Item: D3391-021

D3391-021

Parent Item Name: Fwd Tube Assembly

Start Date: 06/12/2011

Required Date: 13/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3401-041 Manufactured No

255 Each 10.0000 1 1

D3401-041

Tow Cap Assembly

**

B376211 (x1) M 12/02/21

Location

Loc Qty

Loc Code

FP002

10

71878

10

AN960C10L NAS1149C0332 Purchased No

255 Each 0.0000 10 10

R

***AN960C10I ***

washer

**

M120648(x10) M 12/02/21

AN3C4A Purchased No

255 Each 2,382.000 10 10

AN3C4A

BOLT

**

M120423(x10) M 12/02/21

Location

Loc Qty

Loc Code

ST350

2382

117313

2

117688

5

117872

10

118112

16

118451

2

118838

826

119328

521

119749

1000

D3672-1 Manufactured No

255 Each 1,178.000 4 4

D3672-1

Phenolic Washer

**

M 12/02/21

Location

Loc Qty

Loc Code

FP

414

66821

414

ST074

764

72229

264

76277

500

X 4

W/O:		WORK ORDER CHANGES					
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Parent Item Name: Fwd Tube Assembly

Start Date: 06/12/2011

Required Date: 13/12/2011

Start Qty: 1.00

Required Qty: 1.00

AELS-1032-225

Purchased

No

255

Each

0.0000

10

10

AFI S-1032-225

INSERT

**

11126431 (x10) ul 1210270

Ah 54-1032-225

Dart Aerospace Ltd

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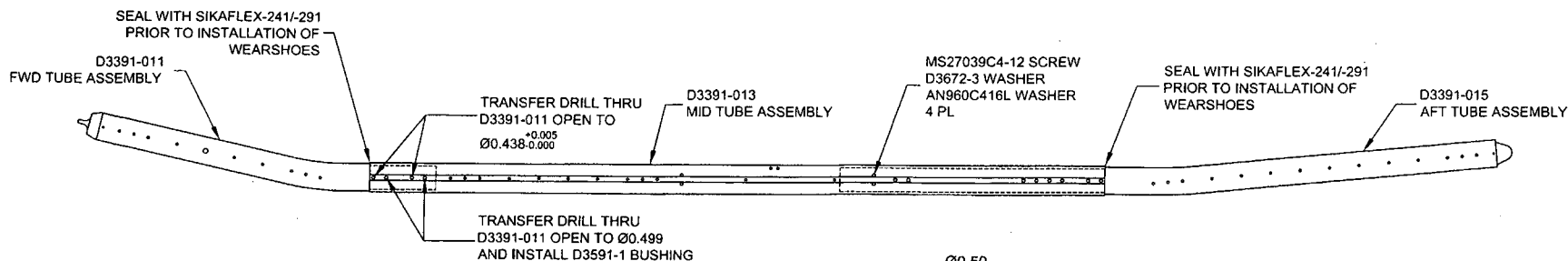
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FIRST ARTICLE INSPECTION CHECKLIST

10.04.15



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 77380 M.L.J

D3391-041 ASSEMBLY

RELEASED
2011-11-04
ECN# 11-662

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL $\varnothing 0.297$ SIZE HOLES FOR WEARSHOE INSERTS. CBORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL $\varnothing 0.50$ HOLES FROM SADDLE TO D4095-041
- FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND TRANSFER DRILL $\varnothing 0.50$ HOLES FROM SADDLE TO D4095-043

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE OSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUBJECT TO THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

Dart Aerospace Ltd

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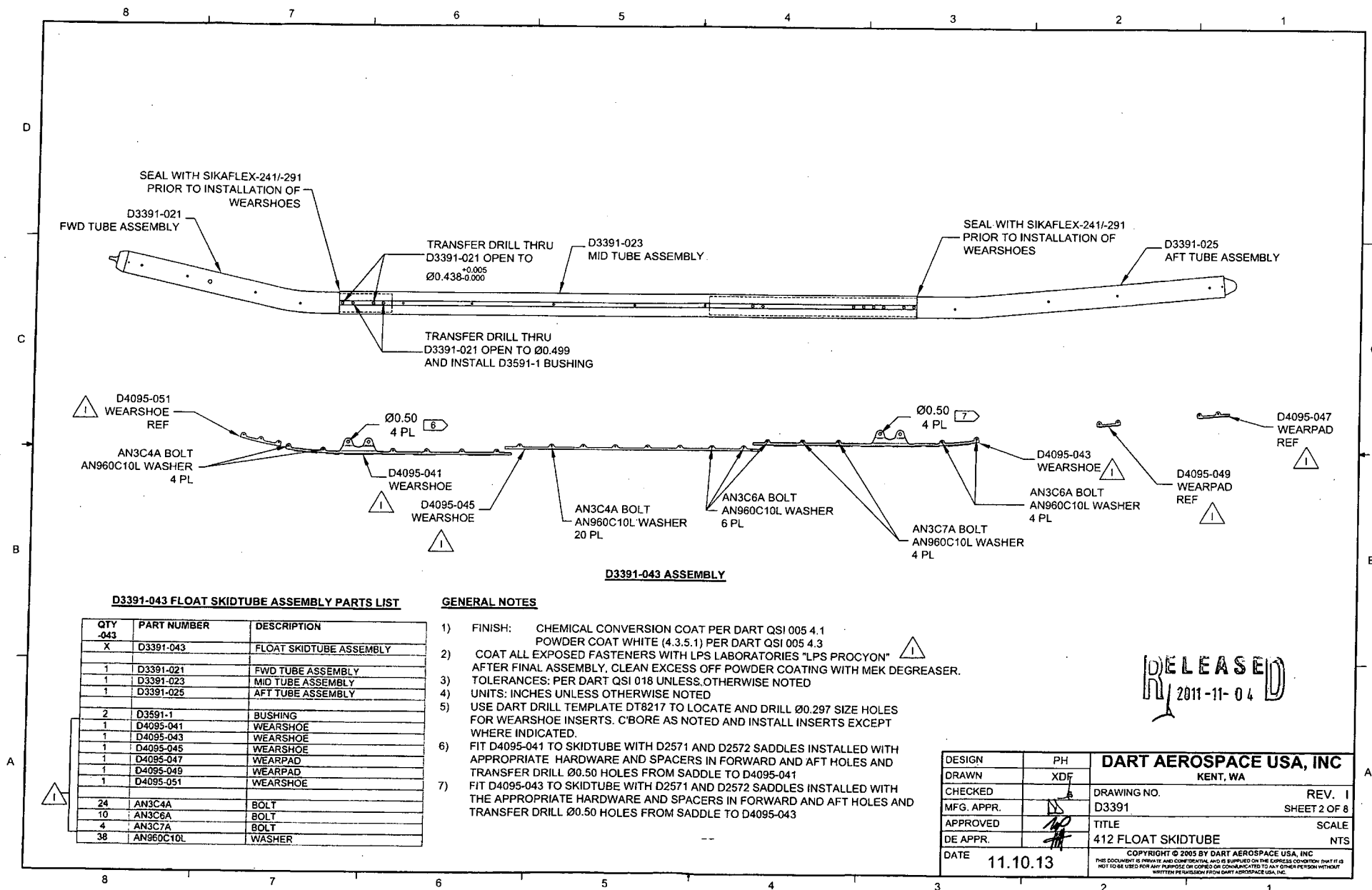
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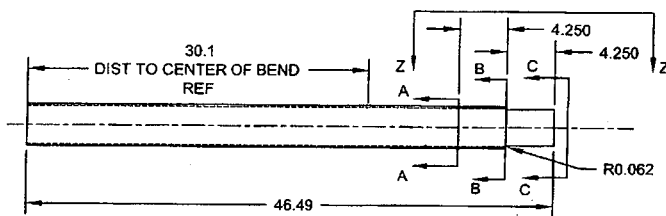
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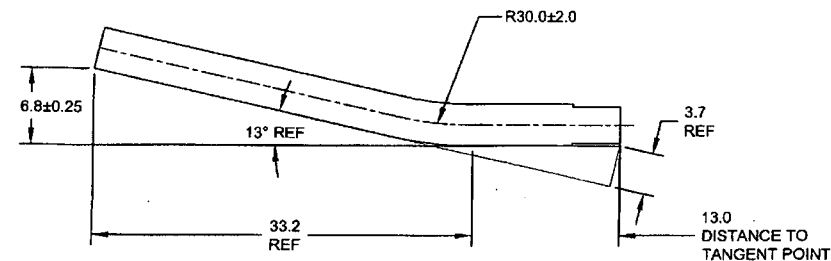
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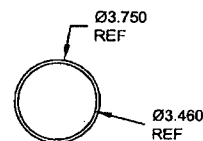
77380



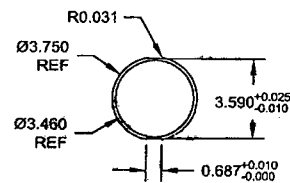
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



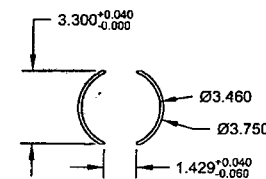
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



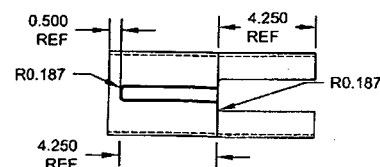
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

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W/O:		WORK ORDER CHANGES					
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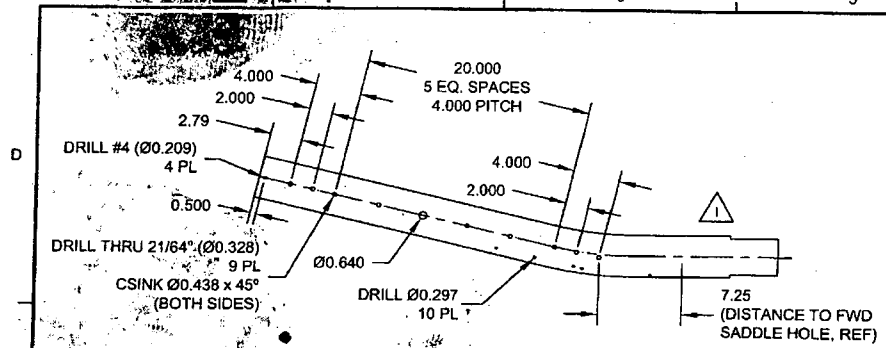
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

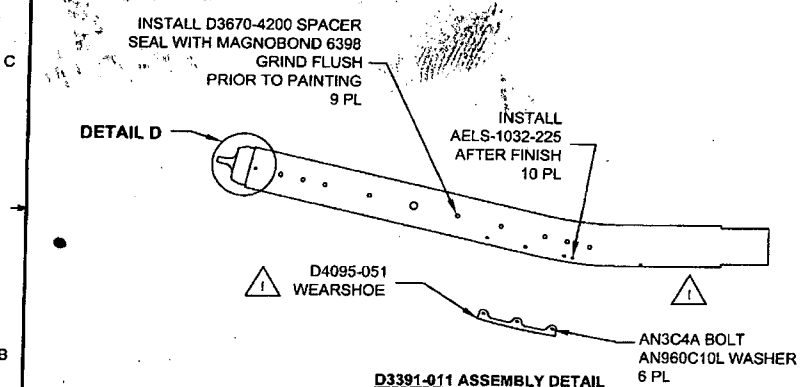
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

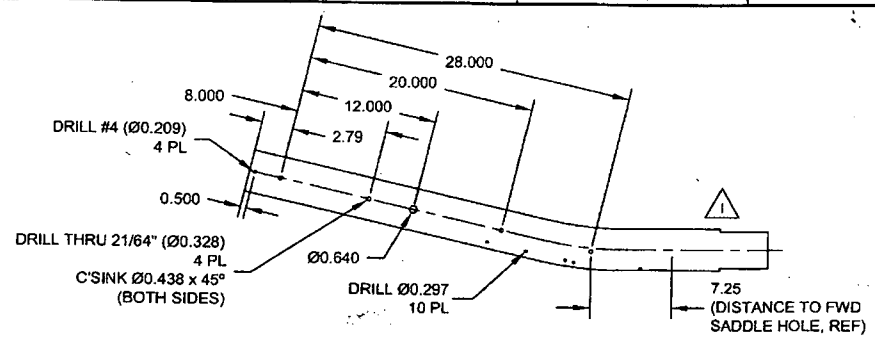
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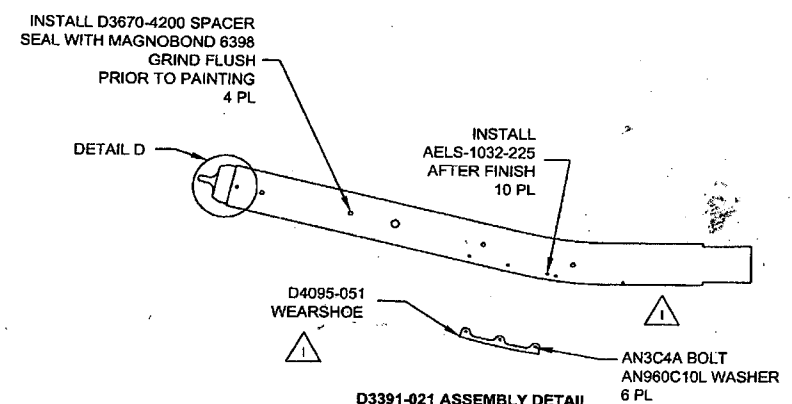
D3391-011 DRILLING DETAIL



D3391-011 ASSEMBLY DETAIL



D3391-021 DRILLING DETAIL

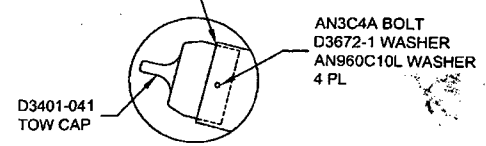


D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT

SEAL WITH SIKAFLEX-241/-291



DETAIL D SCALE 2X

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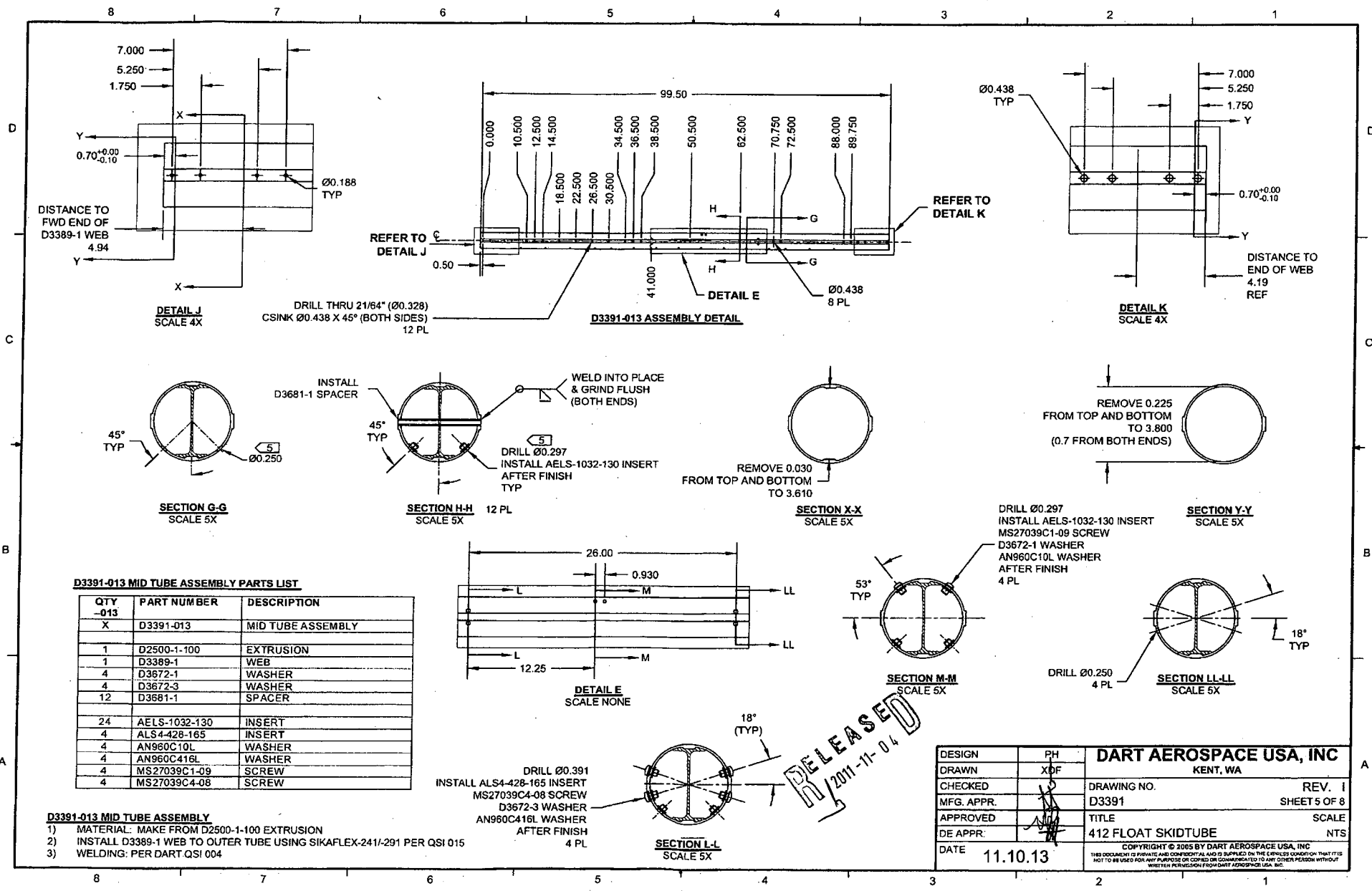
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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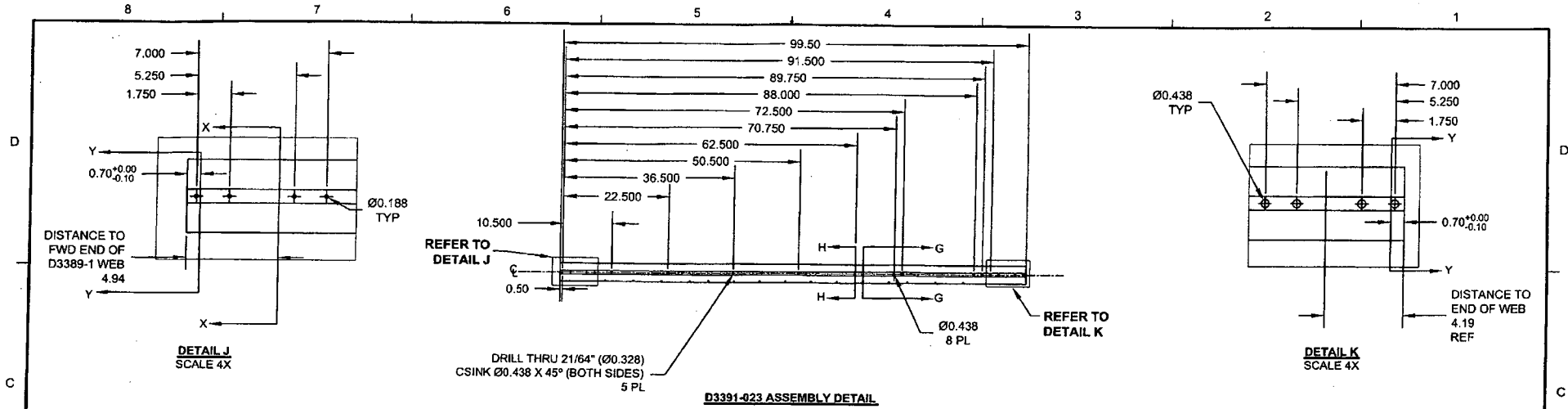
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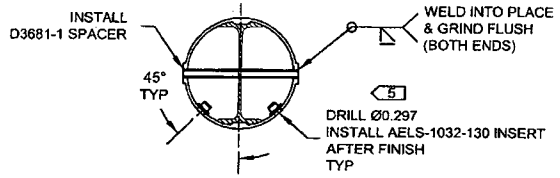
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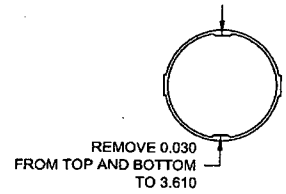
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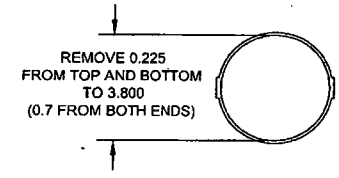
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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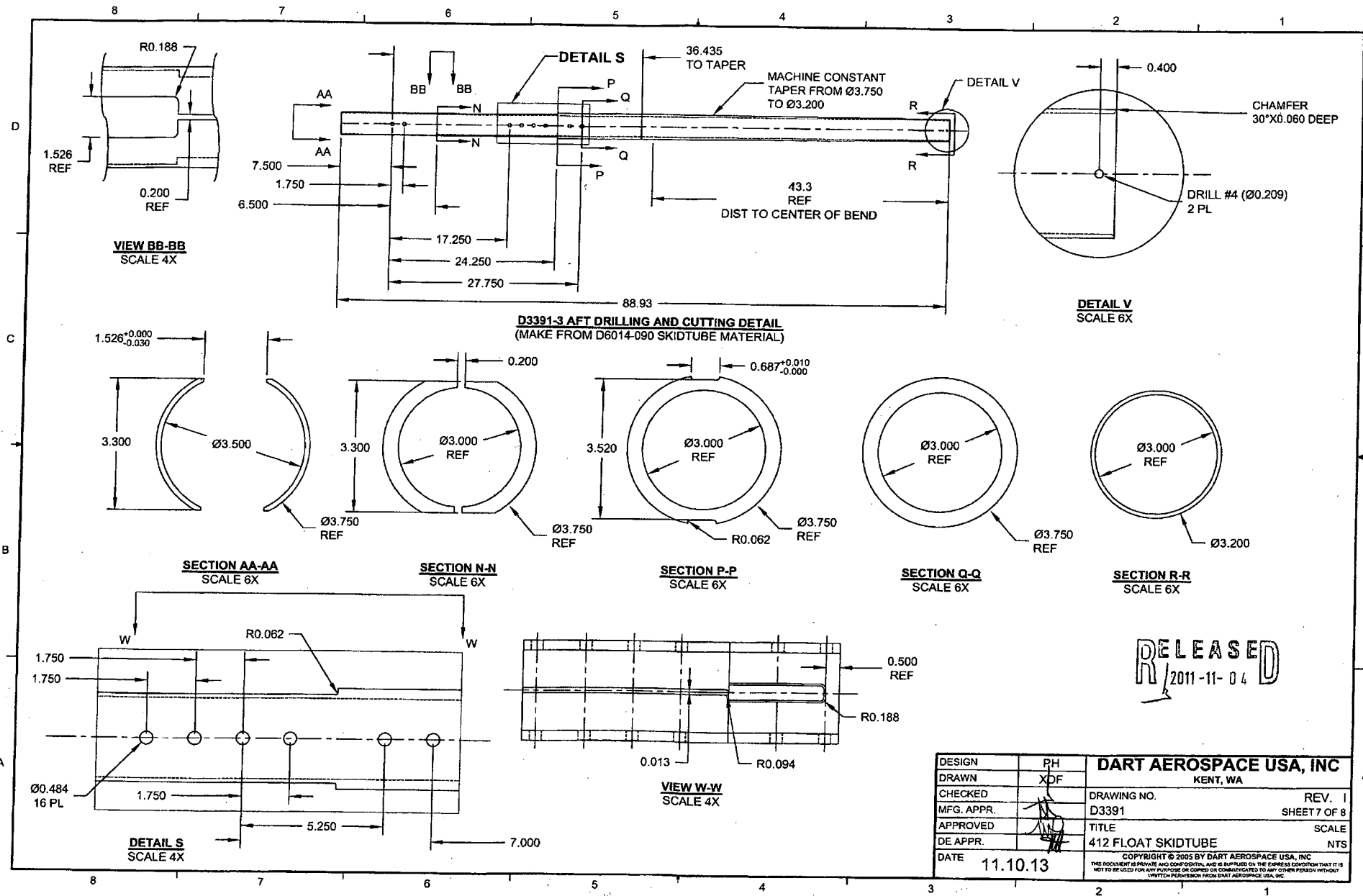
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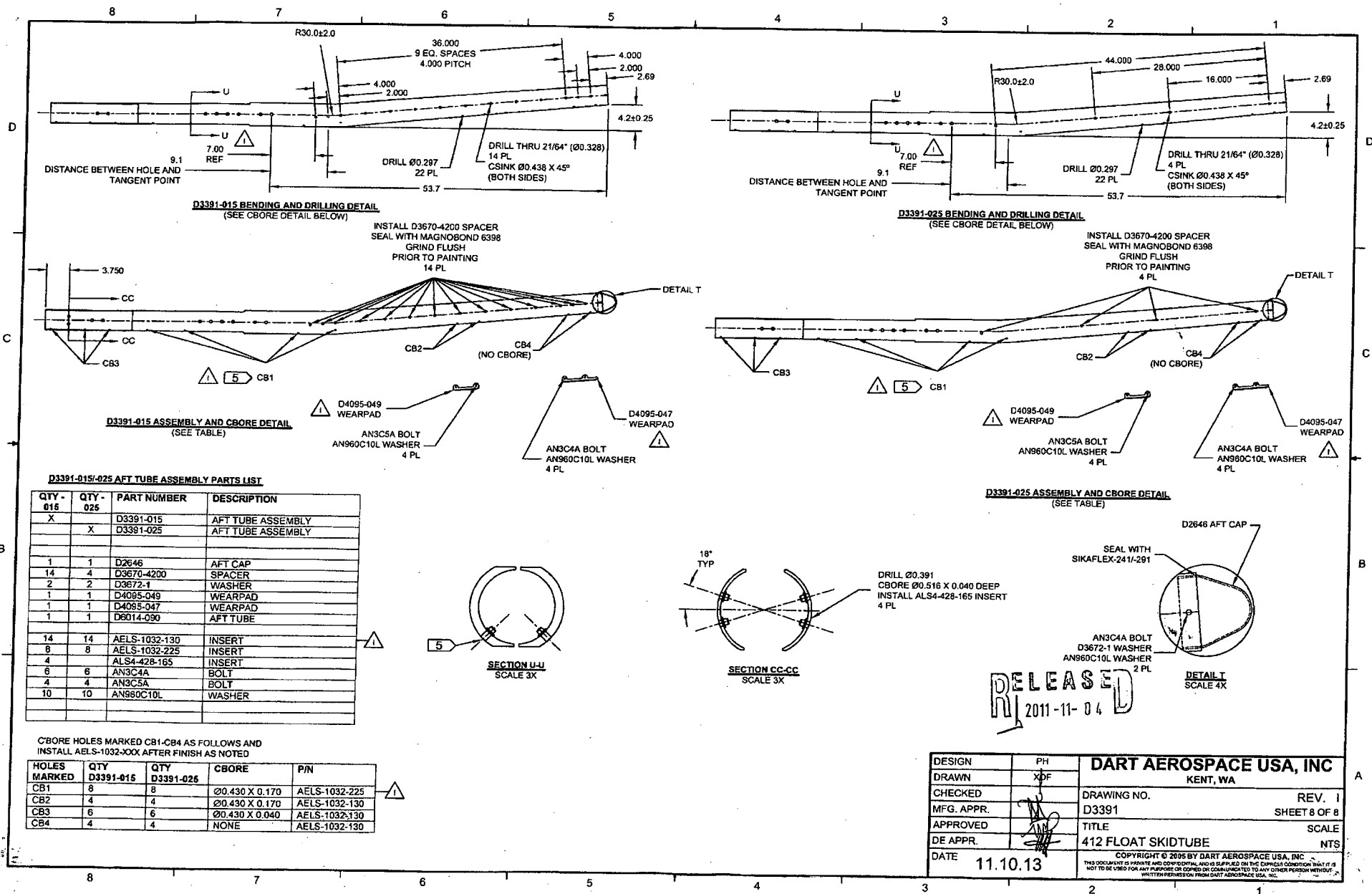
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